

Quiz 1



Name:

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Define **coupling** in the context of software design. Is coupling desired? Why or why not?

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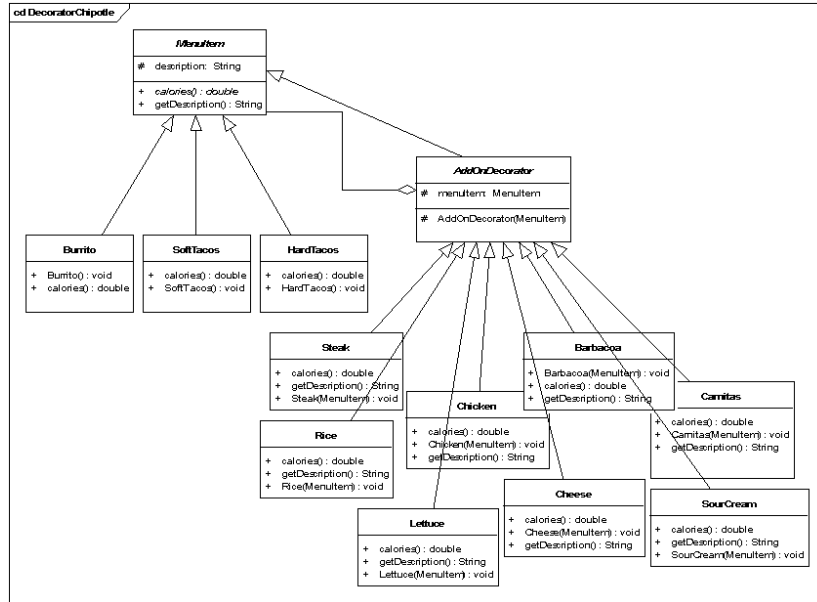
The Iconix process makes use of **robustness diagrams**. Describe what robustness diagrams are used for and how they differ from sequence diagrams.



(a) Draw the generic UML class diagram for the **observer** pattern that shows all of the players.

(b) Draw the generic UML class diagram for the **strategy** pattern that shows all of the players.

Suppose that all of the classes in the following diagram have been implemented except for the **Cheese** class. Adding cheese to an order increases the calorie count by 110 calories. Implement the **Cheese** class.





For the Money Shop example discussed in lecture this week, draw the UML class diagram that shows the relationship between the following classes: MoneyShop, MonopolyFactory, USBillFactory, MonopolyOne, MonopolyFive, MonopolyTen, USBillOne, USBillFive and USBillTen. Note: you may add other classes/interfaces as needed to help show the relationships between the classes listed above. You do not need to show any class attributes in your diagram.



Briefly describe how the **command** pattern could be incorporated into the drawing program developed for lab. What additional features would be easier to add if the command pattern were incorporated into your drawing program?



The **State** pattern is similar to another pattern we discussed earlier in the quarter. Identify the other similar pattern and describe how the two patterns differ. If you are unable to identify the other pattern, you may receive partial credit by describing the State pattern in detail.

Describe how the **flyweight** pattern could be used in the following scenario:

Your company, Botanic Software, is currently developing a hot new landscape design application. In your application, trees don't really do very much; they have an (x, y) location, and they can draw themselves dynamically, depending on how old they are. The thing is, a user might want to have lots and lots of trees in one of their home landscape designs. In fact, you've just landed a big account. The problem is that they are starting to test your software and have noticed that when they start to create large groves of trees, your application starts to get sluggish.

Give one advantage and one disadvantage of using the flyweight pattern.





In order to provide you with the best possible educational experience, I would like to get your comments on what is and isn't working in this class and lab.

At what moment were you most involved (excited, enthusiastic, . . .) in class/lab?

At what moment were you least involved (bored, disconnected, . . .) in class/lab?

What was the most helpful action taken by anyone in class/lab?

What was the most confusing action taken by anyone in class/lab?

What most surprised you?

What would be the first thing you would do differently if you were teaching the class?

Please add any additional comments you have. Indicate if you do *not* wish to have them appear in the summary returned to the class. Use the back of this page if necessary.